

Abstract

A method for delivering applications over a network in which the business logic of the application is running on the backend server, while the user interface of the application is rendered on a client-device who is connected to the backend server via a network . The Graphics User Interface API and event processing API of the application is implemented to be network-aware instead of being local machine centric as traditional GUI APIs: The method includes the following. Running an application on the backend server. The application in turn invokes GUI API to present its user interface, whereby the network-aware GUI API is invoked. Next, translating the application's presentation layer information into a pre-determined format based messages which describe the Graphical User Interface, event processing registries and other related information. Such information describes the presentation layer of the application in a high level, object level, which minimizes network traffic. Next, sending such messages to the client device via a network and then processing the messages and rendering the user interface by a client-side program, which delivers the best possible user experience for that device according to the capability of the specific client device. Next, transmitting necessary user input and client-side events back to the server by the client-side program via a predetermined protocol followed by processing the user input and client-side events on the backend server, translating such events and inputs as if they were locally generated, and sending such translated events and inputs to the application for processing. Next, encoding and routing the output of the application to the client device using the predetermined messaging format and finally further processing the output by the client-side program to refresh the Graphical User Interface thereat.

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